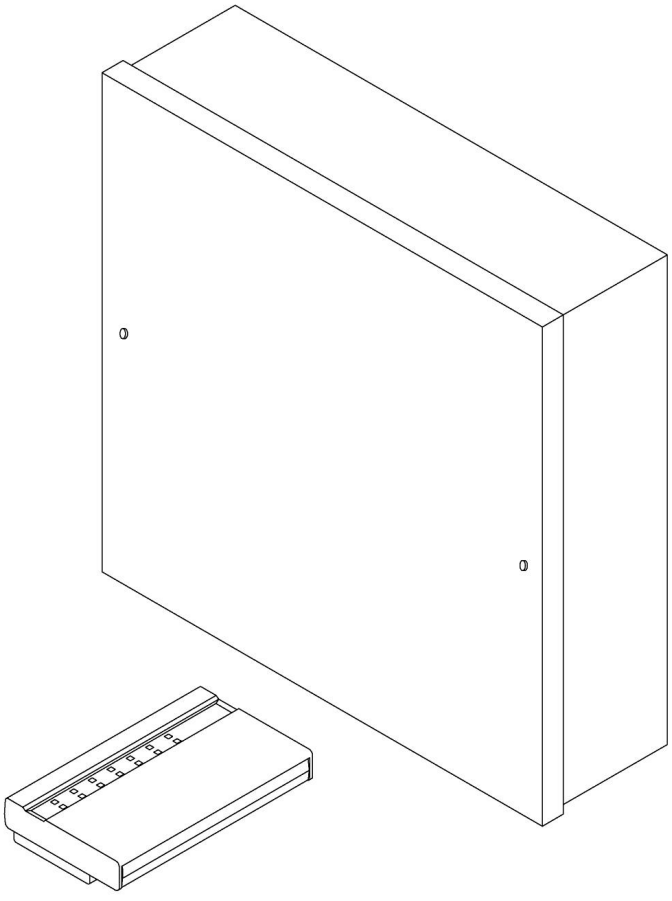
IntelliSense®

INSTALLATION MANUAL



SECURIT 900C CONTROL PANEL

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WARNINGS

Prolonged short circuit of any supply can cause damage to the unit. Take the necessary precautions in not allowing liquids to spill on or into the unit.

STANDARDS

This unit conforms to EMC directive 89/336/EEC, LVD 73/23/EEC & R&TTE (CTR21). This unit has been tested and has proven to meet all current emission and immunity regulations as set out by the EU. This unit conforms to the requirements of BS4737 part 1 1986 which relates to security control equipment.

WARRANTY STATEMENT

This product is covered by the IntelliSense warranty in force as of the purchase date. A copy may be obtained from the address at the end of this document.

PRODUCT DESCRIPTION

The Securit 900C is an 8-zone programmable microprocessor control panel with onboard communicator allowing remote upload and download. There are many options in the programming functions to allow the control panel to be versatile and user friendly. This panel is the ideal choice for residential or light commercial installations where remote communications are needed.

AVAILABLE PARTS

A selection of spares and extras are available. These are:

- Remote Keypad giving full control over the control panel.
- Spare PCB for replacement in the event of damage.

These can be obtained from your original place of purchase.

INTENDED USE

This panel must be installed by a competent person. It is designed to be used in residential and smaller commercial applications such as homes, shops, offices etc.

FACTORY DEFAULTS

User Code 1 (master)	1234
User Code 2 - 8	Disabled
Engineer Code	9090
Full Set Exit Time	30 Seconds
Night Set Exit Time	30 Seconds
Entry time	30 Seconds
Sounder Ring Time	20 Minutes
Bell Trigger Polarity	Negative
Zone Mode	Normally Closed loops

Zone Programming

Zone	Full Set	Part Set	Night Set
1	Final Exit	Final Exit	Final Exit
2	Walkthrough	Walkthrough	Final Exit
3	Alarm	Alarm	Alarm
4	Alarm	Alarm	Alarm
5	Alarm	Alarm	Alarm
6	Alarm	Alarm	Alarm
7	Alarm	Alarm	Alarm
8	Alarm	Alarm	Alarm

Zone Lockout	After 2 alarms
Double Knock Zone	None
Part Set Exit Warning	Silent
Part Set External Bell	On
Night Set External Bell	On
Alarm Trigger Output	Alarm
Set Inhibit	Mains fail only
Alarm Reset	Customer
Tamper Reset	Customer
Easy Set	Disabled
User 8 as Duress	Disabled
Zone Isolation	Allowed
Communications	Alarms in all set modes
Alarm Verification time	45 minutes
Auto Answer Ring Count	14 rings
Bell Delay	None
Dial Type	DTMF
Supplementary Entry Alarm Delay	None
Entry Deviation	Not allowed
Line Fault	Enabled
Line Fault Set Inhibit	Disabled
Restore	Sent at unset
Technistore Version	000
Verified Alarms	Not enabled

INSTALLATION

INSTALLATION

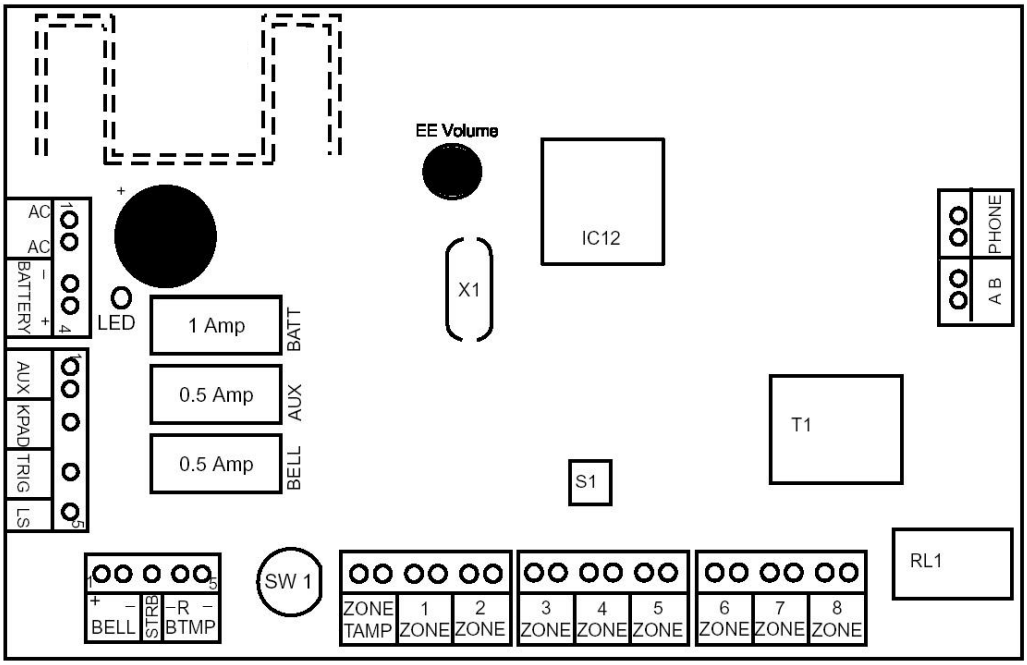
Locate the control panel out of sight, such as in a hall, under stairs or in a cupboard where connection is easy and the detector zone and mains cables can be concealed. Avoid areas subject to high temperatures or humidity such as next to a boiler, airing cupboard or conservatory.

MOUNTING

MOUNTING

1. Remove the lid screws and remove lid.
2. Remove the PCB or keypad packaging.
3. Place the panel in the selected position and mark the fixing holes.
4. Mount the panel securely using all three mounting hole positions.
5. Attach the tamper spring and mount the PCB onto the support pillars.
6. Connect the transformer secondary leads to the AC terminals.
7. Connect the battery leads to BATTERY + and -. Observer polarity.

PCB LAYOUT



WIRING

WIRING THE CONTROL PANEL

ELECTRICAL SAFETY NOTICE

ELECTRICAL SAFETY NOTICE

THIS PRODUCT MUST BE EARTHED

This Power Supply must be permanently connected to the mains supply in accordance with current IEE wiring regulations. A 3 amp fused spur, installed by a qualified electrician, is strongly recommended.

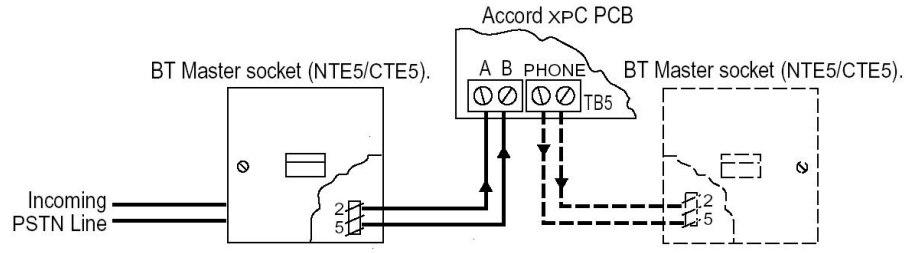
Any fault which could be mains related must be diagnosed and corrected by a qualified electrician to ensure continued safe operation.

CAUTION: Under certain circumstances the transformer metalwork can reach 70°C. This is normal and within prescribed limits.

BATTERY SPECIFICATION

Maximum battery size is12 V 7.0 Ah. The panel requires a standby battery to be fitted to provide power in the event of mains failure. A valve regulated lead acid battery must be used. Observe the battery polarity. Take great care to connect correctly.

TELEPHONE CONNECTIONS

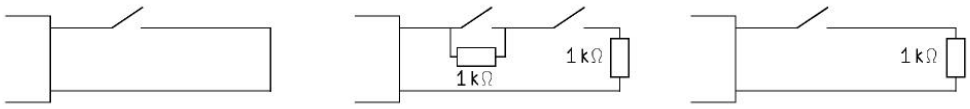


The telephone connections, A & B on TB5, must be hard-wired to the incoming telephone line. If the master socket is the NTE5/CTE5, the connection can be carried out by the installation engineer otherwise the network operator must make the connection. It must **NOT** be installed as an extension to a payphone.

The panel is approved to EEC 98/482/EEC (R&TTE Directive, CTR21-see **Page 23** for a list of countries) for single terminal connection to the Public Switched Telephone Network (PSTN) for

- Auto dialling
- Modem Communications
- Multiple Repeat attempts
- Auto Answer
- Auto Clearing
- Series Connections
- Operation with Call Process Monitoring (CPM) tone recognition

DETECTOR CIRCUITS



Normally Closed Double Balanced EOL Single End-of-Line

Connections for up to eight alarm circuits. Normally closed detection devices must be used. The Zones may be programmed for normally closed loop, double balanced or single End-of-Line resistor modes.

Programmed as Normally Closed (Factory default)

Wire a shorting link across any unused zones. One or more devices may be connected to each alarm circuit. These should be connected in a series configuration. All zone tampers should be wired in series and connected to the **Zone Tamp** terminals.

Programmed as Double Balanced End-of-Line

Wire a 1kΩ resistor across any unused zones. Only one device should be connected to each alarm circuit. Wire the zone and tamper connections in series with a 1kΩ resistor, fit a second 1kΩ resistor across the alarm contact. All other normally closed tampers should wired in series and be connected to the **Zone Tamp** terminals.

SINGLE END OF LINE

Programmed as Single End-of-Line

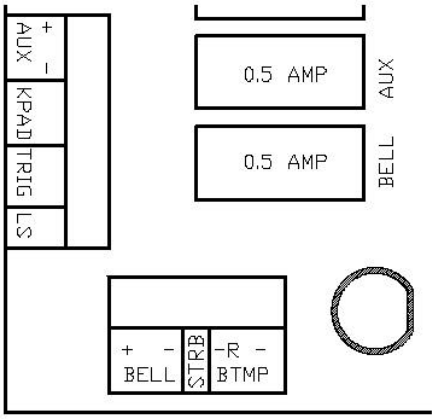
Wire a 1kΩ resistor across any unused zones. Only one device should be connected to each alarm circuit. Wire the zone in series with a 1kΩ resistor fitted within the detector. All zone tampers should be wired in series and connected to the **Zone Tamp** terminals.

SOUNDERS, SPEAKERS & STROBES

INTERNAL SOUNDERS, SPEAKERS & STROBE WIRING

This shows the connection for external sounder and strobe. Please note default sounder trigger is applied negative, (negative ring.).

BELL + Sounder hold off/strobe positive supply
BELL – Sounder switched negative trigger
STRB Strobe switched negative trigger
BTMP – R Sounder tamper return (negative)
BTMP – Sounder hold off supply & sounder tamper feed (negative)



INTERNAL SPEAKER

A 16 Ω (ohm) speaker may be fitted between the **AUX +** & **LS** terminals. If two speakers are required, these should be wired in series.

AUXILIARY DC DETECTOR POWER

AUX DC - DETECTOR POWER

The auxiliary power is provided from connections marked **AUX**. This is to provide the 12 V supply for detectors e.g. movement or glassbreak detectors. The auxiliary power output is rated at 500 mA max. (12 VDC nominal).

TRIGGER OUTPUT

TRIGGER OUTPUT (TRIG)

This is a multifunction output and can be programmed using **Menu 47**.

DETECTOR RESET

OPTION 1 DETECTOR RESET (Menu 47-1)

Some detectors require the removal of power to reset (e.g. Viper Plus® or smoke detectors). The **TRIG** terminal can be programmed to be used as an 'ID' output using option 4-7-1. The **TRIG** terminal should then be used as the negative supply for these devices. The positive supply should be taken from the **AUX +**.

SET LATCH

OPTION 2 SET LATCH (Menu 47-2)

If latching detectors are used the '**TRIG**' should be connected to the appropriate SET or LATCH terminal in your detector connection. It is normally high (12 V) going low (0 V) when set, going high in alarm or when the entry sequence starts. See glossary for explanation.

ALARM OUTPUT

OPTION 3 ALARM OUTPUT (menu 47-3)

This option sets the output normally high (12 V), going low in Alarm, Panic or Fire Alarm.

MOUNTING A REMOTE KEYPADS

MOUNTING REMOTE KEYPADS

1. Choose the keypad location and then mark the holes for mounting.
2. Make sure the cable is run through the backbox.
3. Screw the backbox in the selected position making sure it is not twisted.

WIRING REMOTE KEYPADS

WIRING REMOTE KEYPADS

Use 4-core cable for connection of all remote keypads. Connect the cable, making sure each wire goes to a like named terminal in the panel. **KPD** goes to **KPAD**, **+** to **AUX +** and **-** to **AUX -**. Tamper is signalled through the data bus so no separate connection is required.

Individual keypads do not need to be identified to the system. If more than one remote keypad is used it can be either wired back the control panel or daisy chained from another keypad. All connections are in parallel.

INITIAL POWER UP

INITIAL POWER UP

Prior to the full wiring of the panel we recommend the following installation stages. The lid should remain off the main control panel. Do NOT connect the battery yet.

1. Connect the keypad, wire and switch on the mains supply. The keypad buzzer will start. This denotes a tamper alarm.
2. Enter 1 2 3 4. This will silence the keypad buzzer. This has now acknowledged and cancelled the alarm. However, because the panel lid is removed, the main tamper loop is open and the keypad will indicate the tamper. This is normal.
3. Close the panel lid, enter 1 2 3 4, check the tamper LED clears.
4. Power down and complete the wiring of the control panel. NEVER wire the control panel live.
5. Power back up, enter 1 2 3 4 to cancel the alarm and enter engineer mode by entering **9 0 9 0 # ***. *The panel is now ready for programming.*

ENGINEER MODE

ENTER & EXIT ENGINEER MODE

To enter engineer mode, enter the engineer code and then press the # and ***** keys. The mains light will flash and the keypad will bleep twice to signify the panel has entered engineer mode. Entering engineer mode will abort any communications that may be in progress.

To exit engineer mode, close ALL tamper circuits and enter the # and ***** keys.

ENGINEER RESET

ENGINEER RESET

To perform an engineer reset, enter the engineer code. There is no need to enter engineer programme mode.

PROGRAMMING CONVENTIONS

PROGRAMMING CONVENTIONS

The following conventions are used in the Menu tables:

(**z**) Zone Number – enter key for required zone number.
(**o**) Option Number – enter key for required option number.

Two bleeps will follow a successful data entry.

REVIEWING PROGRAMMING

The currently programmed setting in menu options can easily be reviewed. With the exception of **menu 6**, enter the first **menu number** followed by **00**. The display will sequence through the current setting for each option selected in the group eg. to view night set zones enter **3 0 0**. The display will step through the setting starting at zone 1 and ending with zone 8. A bleep will be heard each time the display steps.

To review **menu 6** (the communications options) enter **6 0** followed by the sub option number. eg. to review the primary telephone number enter **6 0 1**. The display will step through each digit of the programmed number. A bleep will be heard each time the display steps. The display will show numbers 1 through 8, with 'day' corresponding to 0 and 'Tamper' corresponding to 9.

ZONE PROGRAMMING

ZONE PROGRAMMING

Any zone may have independent options programmed for Full, Part & Night set.

FULL SET

FULL SET ZONE PROGRAMMING MENU 1

Enter **1**-(**z**)-(**o**). Enter **1** followed by the key corresponding to the Option Number required from the table below:

Enter **0**	Not Used
Enter **1**	Final Exit
Enter **2**	Keyswitch
Enter **3**	Full Alarm
Enter **4**	Walkthrough
Enter **5**	Tamper (24 hr)
Enter **6**	Silent PA
Enter **7**	Audible PA
Enter **8**	Exit Terminator
Enter **9**	Fire

PART SET

PART SET ZONE PROGRAMMING MENU 2

Enter **2**-(**z**)-(**o**). Enter **2** followed by the key corresponding to the Option Number required from the table below:

Enter **0**	Not Used
Enter **1**	Final Exit
Enter **2**	Keyswitch
Enter **3**	Full Alarm
Enter **4**	Walkthrough
Enter **5**	Tamper (24 hr)
Enter **6**	Silent PA
Enter **7**	Audible PA
Enter **8**	Exit Terminator
Enter **9**	Fire

NIGHT SET

NIGHT SET ZONE PROGRAMMING MENU 3

Enter **3**-(**z**)-(**o**). Enter **3** followed by the key corresponding to the Option Number required from the table below:

Enter **0**	Not Used
Enter **1**	Final Exit
Enter **2**	Keyswitch
Enter **3**	Full Alarm
Enter **4**	Walkthrough
Enter **5**	Tamper (24 hr)
Enter **6**	Silent PA
Enter **7**	Audible PA
Enter **8**	Exit Terminator
Enter **9**	Fire

SYSTEM OPTIONS

SYSTEM OPTIONS

EXIT TIME

EXIT TIME MENU 41

Enter **41**-(**o**). Enter **4** - **1** followed by the key corresponding to the Option Number required from the table below:

Enter **0**	Final contact, door closure setting
Enter **1**	10 seconds
Enter **2**	20 seconds
Enter **3**	30 seconds (Default)
Enter **4**	40 seconds
Enter **5**	50 seconds
Enter **6**	60 seconds
Enter **7**	70 seconds
Enter **8**	80 seconds
Enter **9**	90 seconds

ENTRY TIME

ENTRY TIME MENU 42

Enter **42**-(**o**). Enter **4** - **2** followed by the key corresponding to the Option Number required from the table below:

Enter **1**	10 seconds
Enter **2**	20 seconds
Enter **3**	30 seconds (Default)
Enter **4**	40 seconds
Enter **5**	50 seconds
Enter **6**	60 seconds
Enter **7**	70 seconds
Enter **8**	80 seconds
Enter **9**	90 seconds

BELL CUT-OFF TIME

BELL CUT-OFF TIME MENU 43

Enter **43**-(**o**). Enter **4** - **3** followed by the key corresponding to the Option Number required from the table below:

Enter **1**	1 Minute
Enter **2**	2 Minutes
Enter **3**	3 Minutes
Enter **4**	4 Minutes
Enter **5**	5 Minutes
Enter **6**	10 Minutes
Enter **7**	15 Minutes
Enter **8**	20 Minutes (Default)
Enter **9**	30 Minutes

PART SET EXIT WARNING

PART SET EXIT WARNING SOUNDER MENU 44

Enter **44**-(**o**). Enter **4** - **4** followed by the key corresponding to the Option Number required from the table below:

Enter **0**	Fault & comfort tones only (Default)
Enter **1**	Keypad buzzer only
Enter **2**	Keypad buzzer and sounder

Note. Night set will always be silent i.e. no exit and fault tones heard. With option 2 selected, night set comfort and end of exit time fault tones will be through both the keypad and internal speaker.

PART SET BELLS & STROBE

EXTERNAL BELLS & STROBE IN PART SET MENU 45

Enter **45**-(**o**). Enter **4** - **5** followed by the key corresponding to the Option Number required from the table below:

Enter **0**	Off
Enter **1**	On (Default)

NIGHT SET BELLS & STROBE

EXTERNAL BELLS & STROBE IN NIGHT SET MENU 46

Enter **46**-(**o**). Enter **4** - **6** followed by the key corresponding to the Option Number required from the table below:

Enter **0**	Off
Enter **1**	On (Default)

ALARM TRIGGER OUTPUT

ALARM TRIGGER OUTPUT MENU 47

Enter **47**-(**o**). Enter **4** - **7** followed by the key corresponding to the Option Number required from the table below:

Enter **0**	0 V Detector reset
Enter **1**	Set Latch positive
Enter **2**	Alarm (Default)

QUICK SET

QUICK SET MENU 48

Enter **48**-(**o**). Enter **4** - **8** followed by the key corresponding to the Option Number required from the table below:

Enter **0**	Off (Default)
Enter **1**	On

When enabled, users set the system by pressing the # key and **1** (to Full Set), **2** (to Part Set), or **3** (to Night Set). A valid user code is still required to unset the system.

SET INHIBIT MENU 49

SET INHIBIT

Enter **49**-(**o**). Enter **4** - **9** followed by the key corresponding to the Option Number required from the table below:

Enter **0**	Mains Fail (Default)
Enter **1**	Low battery
Enter **2**	Mains fail and Low battery

MAINS FAIL WARNING MENU 51

MAINS FAIL WARNING

Enter **51**-(**o**). Enter **5** - **1** followed by the key corresponding to the Option Number required from the table below:

Enter **0**	Off (Default)
Enter **1**	Audible

SUPPLIMENTARY ENTRY ALARM DELAY MENU 52

SUPPLIMENTARY ENTRY ALARM DELAY

Enter **52**-(**o**). Enter **5** - **2** followed by the key corresponding to the Option Number required from the table below:

Enter **0**	Off (Default)
Enter **1**	30 second full alarm & comms delay on (internal sounders only).

ALARM RESET MODE MENU 53

ALARM RESET MODE

Enter **53**-(**o**). Enter **5** - **3** followed by the key corresponding to the Option Number required from the table below:

Enter **0**	Customer (Default)
Enter **1**	Engineer
Enter **2**	Technistore
Enter **3**	Technistore & Engineer

KEYPAD SOFT KEY ALARMS MENU 54

KEYPAD SOFT KEY ALARMS

Enter **54**-(**o**). Enter **5** - **4** followed by the key corresponding to the Option Number required from the table below:

Enter **0**	Off (Default)
Enter **1**	On

Keys must be held down together for two seconds for activation.

Panic	Press * and # together. All LEDs (PA) illuminate and a constant tone emits.
Assistance	Press **4** and **6** together. Keypad displays scrolling LEDs with fast pulse tone.
Fire	Press **7** and **9** together. Keypad displays scrolling LEDs with slow pulse tone.

KEYPAD LOCKOUT MENU 55

KEYPAD LOCKOUT

Enter **55**-(**o**). Enter **5** - **5** followed by the key corresponding to the Option Number required from the table below. Keypad lockout occurs after 20 incorrect keypresses and lasts for 10 minutes. No codes are accepted during the lockout time.

Enter **0**	Off (Default)
Enter **1**	On

BELL OUTPUT POLARITY

BELL OUTPUT POLARITY MENU 56

Enter **56**-(**o**). Enter **5** - **6** followed by the key corresponding to the Option Number required from the table below:

Enter **0**	Negative applied (Default)
Enter **1**	Negative removed

ALARM OUTPUT POLARITY

ALARM OUTPUT POLARITY MENU 57

Enter **57**-(**o**). Enter **5** - **7** followed by the key corresponding to the Option Number required from the table below:

Enter **0**	Negative applied (Default)
Enter **1**	Negative removed

TAMPER ALARM RESET

TAMPER ALARM RESET MENU 58

Enter **58**-(**o**). Enter **5** - **8** followed by the key corresponding to the Option Number required from the table below:

Enter **0**	Customer (Default)
Enter **1**	Engineer
Enter **2**	Technistore
Enter **3**	Technistore & Engineer

ZONE MODE

ZONE MODE MENU 59

Enter **59**-(**o**). Enter **5** - **9** followed by the key corresponding to the Option Number required from the table below:

Enter **0**	Normally closed loops (Default)
Enter **1**	Double balanced EOL
Enter **2**	Single EOL

COMMUNICATIONS

PRIMARY TELEPHONE NUMBER

PRIMARY TELEPHONE NUMBER MENU 61

Enter **61** followed by the telephone number. Up to 20 digits are allowed. End entry by pressing *****. Enter # at any position to give a 2 second pause.

SECONDARY TELEPHONE NUMBER

SECONDARY TELEPHONE NUMBER MENU 62

Enter **62** followed by the telephone number. Up to 20 digits are allowed. End entry by pressing *****. Enter # at any position to give a 2 second pause.

ACCOUNT NUMBER

ACCOUNT NUMBER MENU 63

Enter **63** followed by the account number. The entry must be between 4 and 6 digits. End entry by pressing *****.

USER CODE 8 DURESS ALARM

USER CODE 8 DURESS ALARM MENU 64

Enter **64**-(**o**). Enter **6** - **4** followed by the key corresponding to the Option Number required from the table below:

Enter **0**	Off (Default)
Enter **1**	On

DOWNLOADER TELEPHONE NUMBER MENU 65

DOWNLOADER TELEPHONE NUMBER

Enter **65** followed by the telephone number. Up to 20 digits are allowed. End entry by pressing *****. Enter # at any position to give a 2 second pause.

DOWNLOADER ID NUMBER MENU 66

DOWNLOADER ID NUMBER

Enter **66** Followed by an 8 digit ID number corresponding to the ID number entered into the downloader software. Defaults to 99999999.

AUTO ANSWER RING COUNT MENU 67

AUTO ANSWER RING COUNT

Enter **67**-(**o**). Enter **6** - **7** followed by a two digit number for ring count required between 00 and 15. Default setting is answer after 14 rings.

Enter **00** Never answer
Enter **15** Answering machine defeat

ANSWERING MACHINE DEFEAT

ANSWERING MACHINE DEFEAT

This is used to download to the panel when it is on a line shared by a fax or answering machine. To connect, dial in with the downloader, let the phone ring once only. Then hang up the call with the downloader, the answer machine or fax will not respond to the call. The panel detects the single ring and hangs-up, then goes into immediate answer mode for 30 seconds to allow it to respond to the downloader's repeat call.

COMMUNICATOR FORMAT MENU 68

COMMS FORMAT

Enter **68**-(**o**). Enter **6** - **8** followed by the key corresponding to the Option Number required from the table below:

Enter **0** Communicator off (Default)
Enter **1** High speed
Enter **2** Contact ID

HANDSHAKE FORMAT MENU 69

HANDSHAKE FORMAT

Enter **69**-(**o**). Enter **6** - **9** followed by the key corresponding to the Option Number required from the table below:

Enter **0** UK (Default)
Enter **1** Belgium
Enter **2** Paris

NOTE: This option must remain set as default to operate correctly within the UK.

DUAL REPORTING MENU 71

DUAL REPORTING

Enter **71**-(**o**). Enter **7** - **1** followed by the key corresponding to the Option Number required from the table below:

Enter **0** Off (Default)
Enter **1** On

NOTE: If dual reporting is selected, a secondary telephone number must be programmed into menu 62.

DIAL TYPE MENU 72

DIAL TYPE

Enter **72**-(**o**). Enter **7** - **2** followed by the key corresponding to the Option Number required from the table below:

Enter **0** Pulse
Enter **1** DTMF (Default)

LINE FAULT INHIBIT SETTING

LINE FAULT INHIBIT SETTING MENU 73

Enter **73**-(**o**). Enter **7** - **3** followed by the key corresponding to the Option Number required from the table below:

Enter **0** No (Default)
Enter **1** Yes, inhibit setting with phone line fault

BELL DELAY

BELL DELAY MENU 74

Enter **74**-(**o**). Enter **7** - **4** followed by the key corresponding to the Option Number required from the table below:

Enter **0** No (Default)
Enter **1** Yes, 10 minute bell/sounder delay on alarm

PUSH TO SET

PUSH TO SET MENU 75

Enter **75**-(**o**). Enter **7** - **5** followed by the key corresponding to the Option Number required from the table below:

Enter **0** No timed or contact set (Default)
Enter **1** Yes, Full set only
Enter **2** Yes, Full & Part set
Enter **3** Yes, Full & Night set
Enter **4** Yes, All set modes

NOTE: Push to Set on full set is overridden if final contact/Door setting is selected in Menu 41 (option 0)

WHEN TO COMMUNICATE

WHEN TO COMMUNICATE MENU 76

Enter **76**-(**o**). Enter **7** - **6** followed by the key corresponding to the Option Number required from the table below:

Enter **1** Full set only
Enter **2** Full & Part set
Enter **3** Full & Night set
Enter **4** All set modes (Default)

LINE FAULT

LINE FAULT MENU 77

Enter **77**-(**o**). Enter **7** - **7** followed by the key corresponding to the Option Number required from the table below:

Enter **0** Disabled
Enter **1** Enabled (Default)

DOWNLOADER OPTIONS

DOWNLOADER OPTIONS MENU 78

Enter **78**-(**o**). Enter **7** - **8** followed by the key corresponding to the Option Number required from the table below:

Enter **0** Full access allowed
Enter **1** No access when set (Default)
Enter **2** Prevent unsetting

COUNT LOCKOUT

ZONE ALARM COUNT LOCKOUT MENU 79

Enter **79**-(**o**). Enter **7** - **9** followed by the key corresponding to the Option Number required from the table below:

Enter **0** Lockout after 2 alarms (Default)
Enter **1** Lockout after alarm

COMMUMICATIONS REPORTING TYPES

COMMS REPORTING TYPES

COMMUNICATE FIRE ALARMS MENU 81

FIRE ALARMS

Enter **81**-(**o**). Enter **8** - **1** followed by the key corresponding to the Option Number required from the table below:

Enter **0** No (Default)
Enter **1** Yes

COMMUNICATE PA ALARMS MENU 82

PA ALARMS

Enter **82**-(**o**). Enter **8** - **2** followed by the key corresponding to the Option Number required from the table below:

Enter **0** No (Default)
Enter **1** Yes

COMMUNICATE ALARMS MENU 83

ALARMS

Enter **83**-(**o**). Enter **8** - **3** followed by the key corresponding to the Option Number required from the table below:

Enter **0** No
Enter **1** Yes (Default)

COMMUNICATE OPEN / CLOSE MENU 84

OPEN / CLOSE

Enter **84**-(**o**). Enter **8** - **4** followed by the key corresponding to the Option Number required from the table below:

Enter **0** No (Default)
Enter **1** Yes

COMMUNICATE DAY TAMPERS MENU 85

DAY TAMPERS

Enter **85**-(**o**). Enter **8** - **5** followed by the key corresponding to the Option Number required from the table below:

Enter **0** No (Default)
Enter **1** Yes

COMMUNICATE ABORTS MENU 86

ABORTS

Enter **86**-(**o**). Enter **8** - **6** followed by the key corresponding to the Option Number required from the table below:

Enter **0** No (Default)
Enter **1** Yes

COMMUNICATE CONFIRMED ALARM MENU 87

CONFIRMED ALARM

Enter **87**-(**o**). Enter **8** - **7** followed by the key corresponding to the Option Number required from the table below:

Enter **0** No (Default)
Enter **1** Yes

Allows the signalling of alarm confirmation as code 1 on channel 8. The confirmed alarm time window is programmable in menu 02. This defaults to 45 minutes between two separate zone activations.

LOW BATTERY & MAINS LOSS

COMMUNICATE LOW BATTERY & MAINS LOSS MENU 88

Enter **88**-(**o**). Enter **8** - **8** followed by the key corresponding to the Option Number required from the table below:

Enter **0**	No (Default)
Enter **1**	Yes

PERIODIC TEST REPORT

COMMUNICATE PERIODIC TEST REPORT MENU 89

Enter **89**-(**o**). Enter **8** - **9** followed by the key corresponding to the Option Number required from the table below:

Enter **0**	No (Default)
Enter **1**	Every 24 hrs
Enter **2**	Every 7 days
Enter **3**	Every 31 days

ISOLATE

COMMUNICATE ISOLATE MENU 91

Enter **91**-(**o**). Enter **9** - **1** followed by the key corresponding to the Option Number required from the table below:

Enter **0**	No (Default)
Enter **1**	Yes

INVERT OPEN / CLOSE REPORT

INVERT OPEN / CLOSE REPORT MENU 92

Enter **92**-(**o**). Enter **9** - **2** followed by the key corresponding to the Option Number required from the table below:

Enter **0**	No (Default)
Enter **1**	Yes

DOUBLE KNOCK ZONE

DOUBLE KNOCK ZONE MENU 93

Enter **93**-(**z**). Enter **9** - **3** followed by the key corresponding to the Zone Number required. Only one zone may be selected as double knock.

Enter **0**	None selected (Default)
Enter **1**-**8**	Zone selected

This option allows one zone to be programmed as a Double Knock zone. The control panel will only acknowledge the Double Knock zone if it is activated twice within five minutes, or once for more than ten seconds continuous activation.

ISOLATION ALLOWED

ISOLATION ALLOWED MENU 94

Enter **94**-(**o**). Enter **9** - **4** followed by the key corresponding to the Option Number required from the table below:

Enter **0**	No
Enter **1**	Yes (Default)

COMMUNICATE RESTORE

COMMUNICATE RESTORE MENU 95

Enter **95**-(**o**). Enter **9** - **5** followed by the key corresponding to the Option Number required from the table below:

Enter **0**	At unset
Enter **1**	At reset (Default)

ENTRY DEVIATION MENU 96

ENTRY DEVIATION

Enter **96**-(**o**). Enter **9** - **6** followed by the key corresponding to the Option Number required from the table below:

Enter **0** Disabled (Default)
Enter **1** Enabled

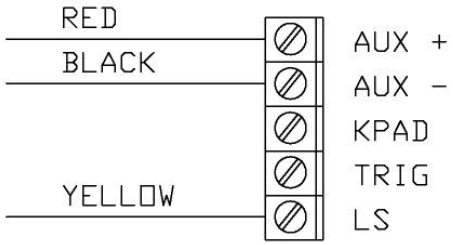
PRINT EVENT LOG MENU 97

PRINT EVENT LOG

Enter **97**-(**o**). Enter **9** - **7** followed by the key corresponding to the Option Number required from the table below:

Enter **0** Disabled (Default)
Enter **1** Print log

The full 250 Event time and date stamped Log can be printed in full by a serial printer connected to the AUX supply and loudspeaker terminal via an adapter (**Part No. 2011-096**). Connect to the panel as follows.



The data format is

- Baud Rate 1200
- Parity None
- Data Bits 8
- Stop Bits 2

When a printer is connected, the print is started by entering **9**-**7**-**1** then exiting Programming Mode by pressing **#** and *****. The complete log will be printed. The log will not print again until this operation is repeated. Disconnect the printer, replace the control panel lid and reset the system.

VIEWING THE EVENT LOG AT THE KEYPAD

VIEWING EVENT LOG

To view the 16 Event Log, Enter a valid **User Code** and press **0**. The most recently activated zone LED lights and the keypad will beep once. The system will scroll through the history of the zone activations. If a zone has been activated two or more times in succession the zone LED will display and the keypad will beep for each activation. Softkey alarms are indicated by all of the Zone LEDs displaying. The keypad will beep twice in rapid succession at the end of the Log display. The time and date stamp information will not be shown. The ***** key can be used to exit the log at any time.

VIEWING THE EVENT LOG FROM DOWNLOADER

VIEWING EVENT LOG FROM DOWNLOADER

The IntelliSense Downloader software allows the 250 Event Log of the panel to be viewed. See the downloader manual for more information.

RESTORE FACTORY DEFAULTS

RESTORE FACTORY PROGRAMMING DEFAULTS MENU 98
Enter **98**-**1** twice within 5 seconds.

RESTORE CODE DEFAULTS

RESTORE CODE DEFAULTS
To restore the engineer and master user code, disconnect the battery and remove mains power. Re-apply power and within 5 seconds hold the ***** and **#** keys down together until two beeps are heard. The engineer code will be restored to **9090** and the master code to **1234**. All other user codes will remain unchanged.

SOFTWARE VERSION

SOFTWARE VERSION MENU 99
Entering **99-1** will display the software version. A sequence of three LEDs will light on the keypad indicating the version number.

ADVANCED COMMS

ADVANCED COMMUNICATIONS

TECHNISTORE VERSION

TECHNISTORE VERSION MENU 01
Enter **01** then enter the Technistore three digit version number given by the Central Station (Alarm Receiving Centre, ARC). This defaults to 000.

CONFIRMED ALARM TIME WINDOW

CONFIRMED ALARM TIME WINDOW MENU 02
Enter **02**-(**o**). Enter **0** - **2** followed by the key corresponding to the Option Number required from the table below:

Enter **0**	45 minutes (Default)
Enter **1**	10 minutes
Enter **2**	20 minutes
Enter **3**	30 minutes

ENGINEER AND USER CODE CHANGE

ENGINEER AND USER CODE CHANGE
The system has 8 user codes. The default codes are
Engineer code **9090** User 1 code **1234**.

To change the **Engineer code**, enter your existing code then press **8 0**, followed by your new 4-digit code the keypad will give two beeps.

If the panel does not accept your code then there may be a conflict with another user code. The panel will abort the code change and retain the old code. Three beeps will be heard from the keypad. Try again with a different code.

The other users are changed in the same way using **existing code**, **8 user number**, **new code**.

Code access levels and numbers

- User **0** is the Engineer
- User **1** is the Master user and can alter all user codes
- Other Users **2** - **7** can only alter their own code
- All codes have the same access authority
- Code **8** is reserved for Duress

DOWNLOADER - FIRST CONNECTION

DOWNLOADER FIRST CONNECTION

To make a first contact from the downloader to the panel. The panel requires the following options programmed before a connection from the downloader can be made. The panel must be in “Day Mode” to enable a connection.

At the Panel

1. Enter engineer mode by entering **9090 # ***, The power LED will flash.

2. If the control panel programming has not been completed, restore the panel defaults by entering 981 followed by 981 again.

3. Enter the # and ***** keys to exit programming mode.

At the Downloader

1. Create a new site (menu “Site” then “New Site”) program the required panel data.

2. Double click on the site to select.

3. Click on “Panel” then “Communications”

4. Click “Mode” then “first contact”

5. In the mode dropdown box select “Dial Site”

6. Click on the Red telephone icon to start the call.

If programmed correctly, the panel will answer the downloader after the number of rings programmed into menu 67

When testing, remember that both the panel and downloader need to be connected to separate telephone lines.

PANEL END - FIRST CONNECTION

PANEL END - FIRST CONNECTION

To make a first contact from the panel to the downloader. The panel requires the following options programmed before a connection with the downloader can be made. The panel must be in “Day Mode” to enable a connection.

At the Downloader

1. Create a new site (menu “Site” then “New Site”) program the required panel data.

2. Double click on the site to select.

3. Click on “Panel” then “Communications”

4. Click “Mode” then “first contact”

5. In the mode dropdown box select “Waiting for call”

PANEL END - FIRST CONNECTION

At the Panel

1. Enter engineer mode by entering **9090 # ***, The power LED will flash.

2. If the control panel programming has not been completed, restore the panel defaults by entering **981** followed by **981** again.

3. Enter **6 5** followed by the Downloader Telephone Number. (Menu 6-5 Downloader Telephone Number). Up to 20 digits are allowed. End entry by pressing ***

4. Enter the # and * keys to exit programming mode.

5. Ensure the downloader is waiting for a call (see At the Downloader above).

6. Enter **9090 # 9**, the panel will call then call the downloader and establish the call.

If programmed correctly, the panel will start the call to the downloader.

When testing, remember that both the panel and downloader need to be connected to separate telephone lines.

FAULT FINDING

A selection of common problems and solutions are listed below.

Problem	Cause	Answer
Tamper will not clear with lid on.	Tamper loop open.	Check 24 hr tamper, sounder tamper and all devices for an open tamper loop.
PA will not work on the keypad.	Not holding * & # long enough or option not enabled.	Be sure to HOLD ***** & **#** until the alarm activates. Enable option **5**-**4**.
Mains light not on.	No mains.	Check fuse & mains supply.
Battery not taking over after mains fail.	Battery fuse blown or battery not connected or flat battery.	Connect battery and check 1A battery fuse. Fit new battery.
Remote keypad not responding.	Incorrect wiring.	Check wiring.
Zones failing to activate.	Incorrect wiring.	Make sure the devices are wired in series NOT parallel.
Zone activates during entry.	Seeing an alarm zone on entry or deviating from entry route.	Make sure all zones on entry route are programmed with walkthrough. Do not deviate.
Zone activates even in day mode.	Programmed to PA or FIRE.	Reprogram the zone to be an alarm zone or similar.

If you are still experiencing problems, then contact our technical helpline with information at hand regarding your installation. If your problem stems from wiring, you may be required to write down wiring instructions so have a pen and paper at hand.

Frequently Asked Questions

Question	Answer
Can two bellboxes be used on the system?	Yes, make sure tampers are in series. Be sure not to exceed maximum current rating.
Can a ‘sound bomb’ be installed?	Yes, connect between AUX+ and S-. Be sure not to exceed maximum current rating.
How many PIRs can be connected to a zone?	It is best practice to limit the number of detectors per zone. However up-to 5 may be fitted. Zone resistance should not exceed 50 ohms.
Can the engineer set the panel without the need of a user code?	Yes, if the engineer code is entered the panel will start the set. The engineer code will also unset if the panel was set using the engineer code, it will not unset if a user set the panel.
What happens if the zone is still in fault when the bell cuts off?	The panel will re-arm. Any zone in fault will be temporally isolated and will re-arm when the fault clears.
Will there be any further alarms?	Any further alarm activation will trigger the bells again for the selected time. If any zone activates three times in succession it will be isolated. Alarms can occur from other zones.

SPECIFICATIONS

Mains Supply Voltage	230 V AC Nominal
PSU Output Voltage	13.8 V Nominal
Maximum Output Current	1 A (total)
AUX. Current	500 mA Max.
Panel Quiescent Current	30 mA
Mains Fuse	2 A (20 mm) Ceramic HRC
Battery Fuse	1 A (20 mm) Anti-surge
AUX Fuse	500 mA (20 mm) Anti-Surge
Speaker/Strobe	500 mA (20 mm) Anti-Surge
Normal operating temperature	0°C to 40°C
Humidity	10 to 90% R.H. non-condensing
Dimensions	263 mm (W) 223 mm (H) 82 mm (D)
Control Panel Weight	2.7 kg Excluding Battery
Standby Battery	12 V 7.0 Ahr Rechargeable Lead Acid
Standby Time (load dependent)	20 hr with 3.0 Ah nom. 46 hr with 7.0 Ah nom. Based on panel, keypad, 2 PIRs & sounder 30+20+20+20+40 mA = 130 mA quiescent at 85% battery capacity

Cable Runs

Zone/circuits	100 m max with 50 mA load
Sounder	50 m max with 7/0.2 100 m max with 16/0.2 or 2 x 7/0.2

Keypads

Supply Voltage	13.8 V
Quiescent Current	20 mA
Active	100 mA max
Maximum allowed	4

CTR21 Interworking

Ring Equivalence	REN 1
Serial Equivalence	SEN 0.3

The ST900C is designed to interwork with the following networks:

Austria	France	Italy	Norway	Switzerland
Belgium	Greece	Liechtenstein	Portugal	United Kingdom
Denmark	Iceland	Luxembourg	Spain	Germany *
Finland	Ireland	The Netherlands	Sweden	

* *May have interworking difficulties.*

Note: Contact the equipment supplier before using the ST900C on any network not listed.

Quick Programming Guide

The default codes Master **1234**
Engineer **9090**

To enter Engineer mode **CODE** ,# ***** The power LED will flash
To Exit Engineer mode # ***** The power LED will be constant

To review the program Menu 6 - Enter **6 n 0**, Where **n** is the second menu number
To review all other menus - Enter **Menu No.**, **00**
The keypad display will step through the programmed settings.

Zone Programming Defaults

	Menu 1	**Menu 2**	**Menu 3**
Zone	Full Set	Part Set	Night Set
1	Final Exit	Final Exit	Final Exit
2	Walkthrough	Walkthrough	Final Exit
3	Alarm	Alarm	Alarm
4	Alarm	Alarm	Alarm
5	Alarm	Alarm	Alarm
6	Alarm	Alarm	Alarm
7	Alarm	Alarm	Alarm
8	Alarm	Alarm	Alarm

Key	**Zone types**
0	Not used
1	Final Exit
2	Keyswitch
3	Alarm
4	Walkthrough
5	Tamper
6	Silent PA
7	Audible PA
8	Exit terminator
9	Fire

System options

	Menu 4	**Default**
41	Exit Time 0=Final Contact, 1-9 = time x 10sec	3
42	Entry Time 1-9 = time x 10sec	3
43	Bell Cut-off Time See Table 1	8
44	Part Set Exit Earning 0=silent, 1=keypad only, 2=keypad & sounder	0
45	External Bell & Strobe in Part Set 0=NO, 1=YES	1
46	External Bell & Strobe in Night Set 0=NO, 1=YES	1
47	Trigger Output See Table 3	3
48	Quick Set 0=NO, 1=YES	0
49	Set Inhibit See Table 4	0

Table 1	
Key	**Time**
1	1 Minute
2	2 Minutes
3	3 Minutes
4	4 Minutes
5	5 Minutes
6	10 Minutes
7	15 Minutes
8	20 Minutes
9	30 Minutes

	Menu 5	**Default**
51	Mains Fail Warning 0=NO, 1=YES	0
52	Supplementary Entry Alarm Delay 0=NO, 1=YES	0
53	Alarm Reset See Table 2	0
54	Softkey Enable 0=NO, 1=YES	0
55	Keypad Lockout 0=NO, 1=YES	0
56	Bell Output Polarity 0=Neg applied, 1= Neg removed	0
57	Alarm Output Polarity 0=Neg applied, 1= Neg removed	0
58	Day Tamper Reset See Table 2	0
59	Zone Mode 0=NC loops, 1=Double balanced, 2=EOL	0

Table 2	
Alarm Reset	
0	Customer
1	Engineer
2	Technistore
3	Engineer & Technistore

	Menu 6	Default
61	Primary telephone number #= 2 sec pause	
62	Secondary telephone number #= 2 sec pause	
63	Account number 4 – 6 Digits	
64	Enable User 8 as Duress Code 0=NO, 1=YES	0
65	Downloader telephone number #= 2 sec pause	
66	Downloader ID number	
67	Ring Count	14
68	Communicator format 0=Off, 1=H/Speed, 2=Contact ID	1
69	CS handshake 0=UK, 1=Belgium, 3=Paris	0

Table 3	
Trigger Output	
1	0 V Detector Reset
2	Set latch Positive
3	Alarm

	Menu 7	Default
71	Dual Reporting 0=NO, 1=YES	0
72	Invert Open /Close 0=NO, 1=YES	1
73	Line fault Full Set Inhibit 0=NO, 1=YES	0
74	Bell delay 0=NO, 1=10 minutes	0
75	Exit Terminate 0=NO, 1=YES	0
76	When to Communicate 0=Full Set, 1=Full & Part Set 2=Full & Night Set 3=All Sets	3
77	Line fault Monitor 0=NO, 1=YES	0
78	Downloader options 0=Full Access 1=No Access When Set 2= Prevent Unsetting	0
79	Zone Alarm Count Lockout 0=2 alarms 1=1 alarm	0

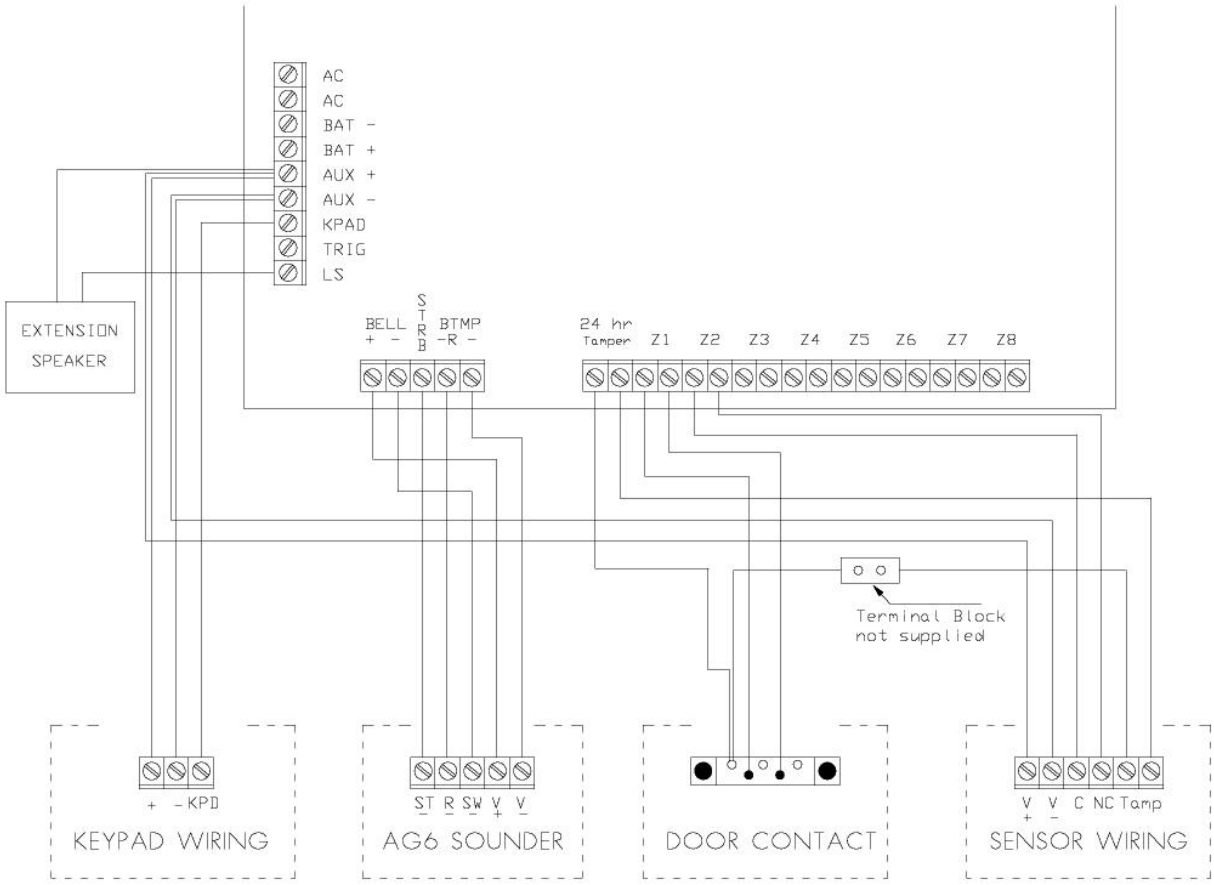
Table 4	
Engineer reset	
0	Customer
1	Engineer
2	Technistore
3	Engineer & Technistore

	Menu 8	Default
81	Communicate FIRE 0=NO, 1=YES	0
82	Communicate PA 0=NO, 1=YES	0
83	Communicate ALARMS 0=NO, 1=YES	1
84	Communicate OPEN & CLOSE 0=NO, 1=YES	0
85	Communicate DAY TAMPERS 0=NO, 1=YES	0
86	Communicate ABORT 0=NO, 1=YES	0
87	Communicate VERIFIED ALARMS 0=NO, 1=YES	0
88	Communicate LOW BATTERY & MAINS LOSS 0=NO, 1=YES	0
89	Communicate PERIODIC TEST 0=NO, 1=YES	0

	Menu 9	Default
91	Communicate ISOLATES 0=NO, 1=YES	0
92	Invert OPEN / CLOSE 0=NO, 1=YES	0
93	Double Knock Zone 0=NONE, 1-8=Zone #	0
94	Zone Isolation Allowed 0=NO, 1=YES	0
95	Send Restore On Unset or Reset 0=NO, 1=YES	0
96	Entry Deviation Allowed 0=NO, 1=YES	0
97	Print Event Log 0=NO, 1=YES	0
98	Set Factory Defaults 1=YES (enter option twice)	0
99	Show Software Version 0=NO, 1=YES	0

	Menu 0		**Default**
91	Report ISOLATES	0=NO, 1=YES	0
92	Invert OPEN / CLOSE	0=NO, 1=YES	0

Wiring Diagram



SOUNDER CONNECTIONS					
CONTROL PANEL ST900C	**STRB**	**BELL -**	**BELL +**	**BTMP -**	**BTMP -R**
SONADE 2000	STROBE -	B	D	A	T
FLASHGUARD XL+	STROBE -	SIREN-	SUPPLY+	SUPPLY-	TAMPER OUT
STARLIGHT 2000	ST	-R	+H	-H	RTN
AG 6 & AG 8	ST-	-SW	V+	V-	RET
NOVA GUARD 2+T	STROBE -	S-	12 V+	12 V-	R
SPIRIT AU1000	STB-	TRG-	HOLD OFF +	HOLD OFF -	RTN-
GENERAL TERMINALS	STROBE TRIG -	SIREN TRIG -	SUPPLY+	SUPPLY-	TAMPER RETURN

NOTES

NOTES

THIS INFORMATION SHOULD BE KEPT EITHER INSIDE THE CONTROL PANEL OR WITH THE INSTALLER. IT CAN BE USED TO REFER TO PROGRAMMING DETAILS WHEN NEEDED.

ZONE	**ZONE USE / LOCATION**	**RESISTANCE**
1		**Ω**
2		**Ω**
3		**Ω**
4		**Ω**
5		**Ω**
6		**Ω**
7		**Ω**
8		**Ω**
TIMER VALUES		
FULL		SECONDS
PART		SECONDS
NIGHT		SECONDS
BELL		MINUTES
BATTERY VOLTAGE		**V**
AUX. VOLTAGE		**V**
INSTALLED BY		

Please Note

IntelliSense are always endeavouring to improve quality and specification of all its products and may alter or amend this product and instructions without notice. All information is given in good faith but without warranty.

CE

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